North American Drought Monitor—April 2005

Canada: April was generally cold and dry in the western provinces and cold and wet in the eastern provinces. Early in the month, temperatures were near or above average on the Prairies, but by mid-month temperatures fell across the Prairies and throughout the country. As a result, forage stands and pastures were growing slowly while plant maturity continues to advance. These cool temperatures will impact negatively on the first cut harvest.

As a result of low precipitation accumulations since last September, regions of southern British Columbia, southern Alberta and southern Saskatchewan were rated abnormally dry to severe drought. Subsoil moisture conditions may be better than these ratings suggest because of the abundant August rainfall in 2004. It is far too early to significantly affect crop production. Current outlooks for forage production, on-farm water supply and annual crops were generally positive.

Water supply conditions in British Columbia (BC) have improved since the summer of 2004. Mid and high elevation snowpacks in most of the BC interior were close to normal on April 1st (generally ranging from slightly below normal to slightly above normal). These areas will experience significant snowmelt and water-supply recharge during the spring freshet, during May and June. Exceptions were: the Similkameen River basin; the Nicola River and Coldwater River basins; lower Fraser and West Fraser areas; southern and western portions of the Okanagan basin; southern portions of the east and west Kootenay. These areas had well below normal snowpacks. The low snow in these areas will result in below-normal spring snowmelt runoff and water-supply recharge. Based on an April-July volume runoff forecast of 760 kdam3 (620,000 acre-feet) (45% of the 1971-2000 normal) for the Similkameen River at Nighthawk, the International Osoyoos Lake Board of Control has issued a formal drought declaration with respect to the operation of Zosel Dam on Osoyoos Lake near Oroville. Although precipitation over the winter was normal to above normal for most of the British Columbia coast, the south coast currently had record low snow water conditions. This includes Vancouver Island, the lower Fraser valley, and other south coastal areas. These areas will experience well below normal spring runoff. For rivers unsupported by storage, a significantly earlier onset of low flow conditions may occur. For the north Okanagan, groundwater levels were declining and below the historic minimum, while groundwater levels for central Okanagan were rising slightly but below average. Groundwater levels for south Okanagan were stable and near the historic minimum. For southeast Cranbrook, groundwater levels were declining and below the historic minimum.

In southern Alberta, as a result of a severely depleted snowpack in January, and much below average precipitation during the March-April period in the Milk River Basin of southern Alberta, natural runoff volumes recorded during March-April 2005 were much below average, ranging from 26% to 28% of average. Recorded volume data was preliminary, and is subject to change. Forecasts for May through September were for below to much below average natural runoff volumes. In the Oldman River basin the volume forecast ranges from 66% to 75% average for the period May 1 to September 30.

In Saskatchewan, with the exception of the northwest area of the grainbelt, where most lakes were very low before spring runoff, the above-normal runoff experienced throughout much of the province helped refill most lakes and reservoirs to, or slightly above, their desirable summer operating levels. Surface moisture is reported be short in the areas identified on the NADM map as abnormally dry to moderate drought.

Although there were some abnormally dry locations in western Manitoba, moisture was generally adequate in western Manitoba and excessive in parts of central and eastern Manitoba.

Parts of the central region of Ontario extending eastward into western Quebec and an area along the southern border region of northwest Ontario were abnormally dry; however, there were no significant impacts. Elsewhere in central and eastern Canada, there has been ample precipitation.

United States: April was unusually dry across the southern Plains, the Great Lakes, and the northern Plains. As a result, abnormally dry conditions appeared in large parts of Texas, Louisiana, Oklahoma, Arkansas, Kansas, Michigan, Wisconsin, Minnesota, and eastern North Dakota by the end of the month. In addition, moderate drought was affecting north central Texas and south central Oklahoma. San Antonio, TX, had their driest April on record with 0.01 inch for the month, beating the previous record of 0.05 inch in 1998. Michigan had its tenth driest and ninth warmest April on record. Temperatures across the central United States generally were above normal for the month, although the last week finished the month on a very cold note for the region.

In the western United States, locations generally saw above-normal precipitation and normal or below-normal temperatures. For the Southwest, this continued a winter-long trend of wetness that is erasing the long-term drought conditions in the region. Nevada, Utah, Colorado, Arizona, and New Mexico saw notable improvements to their drought situations during the month. For the Northwest, the wetness during April continued the more winter-like pattern that began in the middle of March. Although there was some deterioration of the drought conditions, with extreme drought being added in south central Washington (particularly within the Yakima Valley) and north central Oregon, drought conditions generally improved across Idaho, Montana, and Wyoming.

The eastern United States generally experienced normal or above-normal precipitation during April, and dryness or drought was not an issue in this region at the beginning of May. San Juan, Puerto Rico, received 15 inches of precipitation during April, which was 404% of normal. The abnormally dry and drought conditions were improved during the month for most of the island. Hawaii experienced a dry April, and as a result, abnormally dry conditions were introduced in many parts of the state by the end of the month. Dryness or drought conditions were not occurring across Alaska, even though April was drier than normal for most of the state.

Mexico: Although April is a part of the dry season for Mexico, April 2005 was the second driest April nationwide going back to 1941. Only April 1998 was drier across the

country. The SMN reported that precipitation for the month was below normal across 86% of the country, with a monthly national average of 7.8mm. The long-term national average (1941-2004) for April is 19.9mm. As a result of this dryness, there has been an active wildfire season already, although not as bad as in 1998. The only regions of the country that received normal or above-normal precipitation for April were in portions of the states of Baja California Sur, Baja California, Sonora, and Chihuahua in the north and portions of México, Oaxaca, Chiapas, and Campeche states in the south.

Because of the continuing dryness, abnormally dry conditions expanded slightly in portions of Tamaulipas and Veracruz in eastern Mexico. Minor improvements based on the precipitation during April were made to the moderate drought region in Chiapas, while the some of the short-term dryness conditions were relieved in Campeche. The biggest precipitation departures for timescales of 6-, 9-, and 12-months still exist along the Bay of Campeche from central Veracruz through western Campeche. Severe drought conditions in this particular region remain centered on the state of Tabasco.